FELT, V.

Effect of hydrocortisone, growth hormone and l-thyroxin on the transport of blood lipids. Cesk. gastroent. vyz. 17 no.1: 51-57 Ja '63.

1. Vyzkumny ustav endokrinologicky v Praze, reditel doc. dr. K. Silink.
(HYDROCORTISONE) (SOMATOTROPIN)
(THYROXIN) (BLOOD LIPIDS) (BLOOD CHOLESTEROL)
(PHOSPHOLIPIDS) (FATTY ACIDS)

CZECHOSLOVAKIA

Vl. FELT, Sv. RÖHLING, J. STRASEK and St. VOHNOUT, Endocrinology Research Institute (Vyzkumny ustav endokrinologicky) Chief (reditel) Docent Dr K. SILINK, Prague.

"Effect of Regression of Experimental Atherosclerosis on Serum Lipids and Lipoproteins. Studies with 4-C^{14}-Cholesterol."

Prague, Casopis Lekaru Ceskych, Vol 102, No 8, 22 Feb 63; pp 205-208.

Abstract [English summary modified]: Study in 31 rabbits: 13 controls on normal diet, 9 on 1 Gm. dietary cholesterol/day for 6 months, tests 1 month later, 9 same treatment, tested 9½ months later. Cholesteremia and phospholipidemia in latter group were back to normal, aortic cholesterol was less than in second group, and there was a marked shift of labeled cholesterol from beta- to alpha lipoproteins as compared to first group. Seven tables, 2 Soviet, 1 Czech and 24 Western references.

1/1

FELT, V.; ROHLING, S.; VOHNOUT, S.; HLADOVEC, J.

Effect of different phases of experimental atherosclerosis, cortisone and thyroxin on the deposition of 4-C14-labelled cholesterol in rabbil aorta. Cesk. gastroent. vyz. 17 no.3: 135-142 Ap '63.

1. Vyzkumny ustav endokrinologicky v Praze, reditel doc. dr. K. Silink Vyzkumny ustav pro farmacii a biochemii v Praze, reditel inz. J. Nemecek.
(ARTERIOSCLEROSIS) (AORTA) (CORTISONE)
(THYROXIN) (CHOLESTEROL) (CARBON ISOTOPES)

CZECHOSLOVAKIA

FELT, Vl., HLADOVEC, J., ROHLING, S., and VOHNOUT, S., Research Institute for Endocrinology (Vyzkumny ustav endokrinologicky), Docent Dr. K. SILINK, director, and Research Institute for Pharmacy and Biochemistry (Vyzkumny ustav pro farmacii a biochemii, Engr. J. METECEK, director; Prague [individual affiliations cannot be determined].

"Blood Cholesterol Permeability of the Aortal Wall of Rabbits in the Progressive, Stationary, and Regressive Stage of Experimental Atherosclerosis and After Cortisone Administration"

Prague, Casopis Lekaru Ceskych, Vol CII, No 31, 5 Aug st 1963, pp 846-850.

Abstract [Authors' English summary: A radioactive 4-^{14}C-cholesterol was used to prove that the velocity of the transport of the plasma cholesterol into the wall of aorta was increased about 14 times in the progressive stage and 10 times in the stationary stage of atherosclerosis. No significant difference was found between the regressive stage and control cases. Cortisone has no appreciable effect. The velocity of the serum transport was practically the same in all groups. This points against an increased permeability of the endothelium of aorta for the plasma cholesterol in atheromatous rabbits. The increased cholesterol transport into the inner layers of the aorta wall in atheromatous rabbits is considered to be the consequence of an increased cholesterolaemia. Thirty-two 1/1 references, including 4 Czech and 1 Russian.

FELT, Vl.; HLADOVEC, J.; ROHLING, S.; VOHNOUT, S.

Permeability of the aortic wall to blood cholesterol in rabbits in the progressive, stationary and regressive phase of experimental atherosclerosis and after cortisone administration. (Study using 4-C-14-cholesterol). Cas. lek. cesk. 102 no.31: 846-850 5 Ag '63.

1. Vyzkumny ustav endokrinologicky v Praze, reditel doc. dr. K. Silink Vyzkumny ustav pro farmacii a biochemii v Praze, reditel inz. J. Nemecek.

(AORTA) (ARTERIOSCLEROSIS) (CHOLESTEROL)
(CARBON ISOTOPES) (CORTISONE)
(HYPERCHOLESTEREMIA) (PERMEABILITY)

CZECHOSLOVAKIA

FELT, V., ROHLING, S., HAVELKA, J., HLADOVEC, J., and VOHNOUT, S., Research Institute of Endocrinology (Vyzkumny ustav endokrinologicky), Prague, Docent K. SILINK, MD, director; and Research Institute for Pharmacy and Biochemistry (Vyzkumny ustav pro farmacii a biochemii), Prague, Engr J. NEMECEK, director.

"Distribution of 4-^{14}C-Cholesterol in the Liver, Lung, Heart, and Kidney of Rabbits in Three Stages of Experimental Atherosclerosis"

Prague, Casopis Lekaru Ceskych, Vol CII, No 37, 13 September 63, pp 1007-1011.

Abstract [Authors' English summary]: The distribution of radioactivity in organs after an intravenous administration of 4-^{14}C-cholesterol in rabbits during three stages of experimental atherosclerosis was essentially the same as in a control group. During the stationary stage the radioactivity was highest in the liver as a manifestation of an increased elimination of cholesterol from the organism. During the regressive stage the concentration declined most rapidly in the heart and most slowly in the liver. Eight references.

1/1

FELT, V.; ROHLING, S.; HAVELKA, J.; HLADOVEC, J.; VOHNOUT, S.

Distribution of 4-C14-cholesterol in the liver, lungs, heart and kidneys in rabbits in 3 developmental phases of experimental arteriosclerosis. Cas. lek. cesk. 102 no.37:1007-1011 13 S '63.

1. Vyzkumny ustav endokrinologicky, Praha, reditel doc. dr. K. Silink. Vyzkumny ustav pro farmacii a biochemii, Praha, reditel ing. J. Nemecek.

(CHOLESTEROL) (LIPID METABOLISM) (LIVER) (HEART) (LUNG) (KIDNEY) (ARTERIOSCLEROSIS) (CARBON ISOTOPES)

FELT, V.; NOVOTNY, A.

Relation of carbohydrate and lipid metabolism in pregnancy.
Cas. lek. cesk. 103 no.43:1193-1196 23 O '64.

1. Vyzkumny ustav endokrinologicky v Praze, (reditel doc. dr. K. Silink, DrSc.) a Ustav pro peci o matku a dite v Praze, (reditel doc. dr. M. Vojta).

FELT,V.; STANKA,L.; BEHNAR, J.

Effect of dehydroepiandrosterone and atromid on serum lipids in patients with hypercholesteremia or hypertriglyceridemia. Cas. lek. cesk. 104 no.7:186-189 19 F'65.

1. Vyzkumny ustav endokrinologicky v Praze (reditel: doc. dr. K. Silink, DrSc.).

FELT, V. (Praha 1, VUE, Narodni 8)

I-131 treatment of thyrotoxic patients with cardiac involvement.
Cas. lek. cesk. 104 no.10:41-49 12 Mr'65.

1. Vyzkumny ustav endokrinologicky v Praze (reditel: doc. dr. K. Silink, DrSc.).

STARKA, L.; FELT, V.; SULCOVA, J.

Steroid excretion after atromid and dehydroepiandrosterone in persons with hypercholesteremia. Cas. lek. cesk. 104 no.11:286-292 19 Mr'65.

1. Vyzkumny ustav endokrinologicky v Praze (reditel: doc. dr. K. Silink, DrSc.).

FELT, V.; BEDNAR, J.

Protein-bound and inorganic iodine in the serum of younger and older euthyroid persons, and their changes after administration of triiodothyronine. Cas. lek. cesk. 104 no.15:401-405 16 Ap'65.

1. Vyzkumny ustav endokrinologicky v Praze (reditel : doc. dr. K. Silink, DrSc.).

FELT,V.; STARKA,L.

Changes in the excretion of steroid metabolites in patients with hyperthyroidism and heart involvement before and after therapy with radioactive iodine I-131. Cas. lek. cesk. 104 no.19:511-517 14 My '65.

1. Vyzkumny ustav endokrinologicky v Praze (reditel: doc. dr. K. Silink, DrSc.). 2. V.Felt's address: Praha 1, Narodni tr.8.

NOZICKA, Zdenek; MATYS, Zdenek; SILINKOVA-MALKOVA, Eva; PANOS, J.; FELT, V.

Cushing's syndrome in mixed, fascicular hypophyseal adenoma. Sborn. ved. prac. lek. fak. Karlov. Univ. 8 no.4:489-494 '65.

1. Patologicko-anatomicky ustav (prednosta: prof. MUDr. A. Fingerland, DrSc.); III. interni klinika vseob. lekar. Karlovy University, Praha (prednosta: akad. J. Charvat); II. interni klinika detskeho lekarstvi, Praha (prednosta: prof. MUDr. R. Folt, DrSc.) a Vyzkumny ustav endokrinologicky, Praha (prednosta: doc. MUDr. K. Silink).

FELT, V.

Changes in the blood sugar level of man during aging.
Vnitrni lek. 11 no.12:1158-1163 D '65

1. Vyzkumny ustav endokrinologicky, Praha (reditel: doc. MUDr. K. Silink, DrSc.).

SOUMAR, Josef; FELT, Vladimir; REISENAUER, Roman

Decreased thyroid activity as a late consequence of I-131 therapy.
Vnitrni lek. 11 no.10:964-969 O '65.

1. Vyzkumny ustav endokrinologicky v Praze (prednosta doc. MUDr. Karel Silink, Dr.Sc.).

FELT, V[illegible].; MARSIKOVA, L.; PLZAK, F.

Effect of dehydroepiandrosterone and atromid on the serum uric acid level. Vnitrni lek. 11 no.10:960-963 O '65.

1. Vyzkumny ustav endokrinologicky, Praha (reditel doc. MUDr. K. Silink, Dr.Sc.).

FELT, V.; BEDNAR, J.

Protein-bound and inorganic iodine in serum of younger and older euthyroid subjects and changes following the administration of triiodothyronine. Rev. Czech. med. 11 no.4:238-245 '65.

1. Research Institute of Endocrinology, Prague (Director: Doc. K. Silink, M.D., D.Sc.).

FELT, Vl.; STARKA, L.

Effect of triiodothyronine on the elimination of fractions of urinary 17-ketosteroids and 17-ketogenic steroids in younger and older persons. Vnitrni lek. 11 no.9:868-872 S '65.

1. Vyzkumny ustav endokrinologicky, Praha (reditel doc. MUDr. Karel Silink, DrSc.).

FELT, V., Praha 1, Narodni tr. 8; VOHNOUT, S.; RÖHLING, S.

Effect of triiodothyrenine and thyroxine on the binding capacity of human serum for thyroid hormones. Cas. lek. Cesk. 104 no.44: 1210-1213 5 N '65.

1. Vyzkumny ustav endokrinologicky v Praze (reditel doc. dr. K. Silink, DrSc.). Submitted December 1964.

FELT, V., (Praha 1, Narodni tr.8); GONCAROV, N.P.; VOHNOUT, S.

Effect of cortisone and ACTH on plasma cholesterol in Macacus rhesus monkey. Cas. lek. Cesk. 104 no.44:1213-1216 5 N '65.

1. Vyzkumny ustav endokrinologicky v Praze (reditel doc. dr. K. Silink, DrSc. a Institut experimentalni patologie a terapie AMN (reditel prof. B.A. Lapin, DrSc.) Suchumi, SSSR. Submitted November 1964.

Endocrinology

CZECHOSLOVAKIA UDC 616.432:616.453)-008.61-039.5-008.9(:547.915:547.454)

FELT, V.; Endocrinological Research Institute (Vyzkumny Ustav Endokrinologicky), Prague, Director (Reditel) Docent Dr K. SILINK.

"Relationship Between Carbohydrate and Lipid Metabolism in Patients with Hypercortisolism -- Cushing's Syndrome."

Prague, Casopis Lekaru Ceskych, Vol 105, No 41, 12 Oct 66, pp 1110 - 1116

Abstract [Author's English summary modified]: In 20 patients raised serum levels of non-esterified fatty acids (NEFA), cholesterol, neutral fat, blood sugar level, cholesterol/phospholipid index were found. A correlation between blood sugar level while fasting and the cholesterol blood level was determined. After glucose administration the rate constant of removal of NEFA in serum of patients was lowered, which indicates a deteriorated glucose utilization in adipose tissue hypercortisolism. The reduction in the content of cholesterol and phospholipids after glucose administration is discussed; the role of pituitary-adrenal system in atherogenesis is described. 3 Figures, 3 Tables, 37 Western, 7 Czech references. (Manuscript received Oct 65).

1/1

CZECHOSLOVAKIA UDC 616.132-004.6:616.127):616.441-008.61

ERBERT, Z.; FELT, V.; Endocrinological Research Institute (Vyzkumny Ustav Endokrinologicky), Prague, Director (Reditel) Docent Dr K. SILINK.

"Aortal and Coronary Atherosclerosis and Findings on the Heart Muscle in Thyrotoxicosis."

Prague, Casopis Lekaru Ceskych, Vol 105, No 42, 21 Oct 66, pp 1137 - 1142

Abstract [Authors' English summary modified 7: The authors found in 50 post-mortem examinations that the degree of aortal and coronary atheromatosis is lower in subjects who suffered from thyrotoxicosis. Presence of diastolic hypertension increases atheromatosis even in subjects with thyrotoxicosis. Short-term thyrotoxicosis does not influence atherosclerosis, but may lead to myocardial infarction; disseminated myofibrosis is 3x more frequent in such subjects than in controls. 54% of patients with fibrillation had coronary vessels free of atheromatous lesions. Incidence of coronary atheromatosis, disseminated myofibrosis, and angina pectoris is discussed. 4 Figures, 1 Table, 15 Western, 3 Czech references. (Ms. rec. Dec 65).

1/1

CZECHOSLOVAKIA

FELT, V.; SIEBEROVA, R.; STARKA, L.; Research Institute of Endocrinology (Vyzkumny Ustav Endokrinologicky) Prague, Director (Reditel) Docent Dr K. SILINK; 2nd Internal Clinic, Faculty of Pediatrics, Charles University (II. Interni Klinika Fakulty Detskeho Lekarstvi KU), Prague, Chief (Prednosta) Prof Dr R. FOIT.

"Steroid Metabolites in Urine of Diabetic Patients."

Prague, Casopis Lekaru Ceskych, Vol 106, No 5, 3 Feb 67, pp 140 - 141

Abstract [Author's English summary modified]; Urinary excretion of steroid metabolites was investigated in 7 diabetic men with signs of insulin deficiency; the ratio of etiocholanolone to androsterone is considered to be an indicator of steroid 5-alpha reductase activity. When insulin deficiency was adjusted no changes in the ratio of these 2 compounds were observed. When insulin was supplemented, 17 KS and 17 KGS excretion in urine declined to low levels. 2 Tables, 7 Western, 3 Czech references.

1/1

FELTER, K.

Mechanization of the manufacture of fine-ceramic products. p. 291
Vol 7, no. 8. Aug. 1955. EPITOANYAG. Budapest, Hungary.

So: Eastern European Accession. Vol 5, No. 4, April 1956

FEL'TGEYM, P.E.; LIFANOV, A.I.

Air dustiness due to wet boring of horizontal holes. Bez.truda v prom. 6 no.1:20-21 Ja '62. (MIRA 15:1)

1. TSentral'nyy nauchno-issledovatel'skiy gornorazvedochnyy institut tsvetnykh, redkikh i blagorodnykh metallov.
(Mine dust--Safety measures)

FELTIN', I. A., CAND PHYS-MATH SCI, # Study ~~INVESTIGATION~~ OF THE ELECTRICAL PROPERTIES OF GALLIUM ARSENOSELENIDES (CaAs - Ca_2Se_3)". RIGA, 1960. (BELORUSSIAN STATE UNIV IM V.I. LENIN). (KL, 2-61, 199).

ACCESSION NR: AP5009964

AUTHOR: Kalnina, R. (Kalnynya, R. P.); Feltins, I. (Feltyn', I.A.)

TITLE: Production of protective films of silicon dioxide on germanium and investigation of their protective properties

SOURCE: AN LatSSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk, no. 1, 1965, 26-32

TOPIC TAGS: silicon dioxide, protective coating, prolytic decomposition, tetraethoxysilane, thin film

ABSTRACT: The purpose of this work was to study the conditions under which SiO_2 films can be obtained on germanium by decomposition of tetraethoxysilane, and to check on the masking properties of the obtained films in processes involving the diffusion of antimony and indium, as well as the fusing of indium in germanium. The films were [illegible] germanium by pyrolytic decomposition of the tetraethoxysilane, using a setup whose schematic diagram is shown in Fig. 1 of

Card 1/3

L 58292-65
ACCESSION NR: AP5009964

Films 200 -- 20,000 Å thick were produced by this technique. A study was made of the influence of various factors on the film growth, such as duration of the process, temperature of the reaction space, speed of the carrier gas stream, and temperature of the silane. The coefficient of refraction of the obtained films was found to be equal to the coefficient of refraction of SiO_2 produced by

[illegible] of silicon. Films of thickness larger than 500 Å, in the [illegible] interval from 800 to 900C, after a diffusion annealing time up to 4 hours, were found to be practically impermeable to the diffusing substance. SiO_2 films protect the surface [illegible] against diffusion of indium up to 650C. Original article has: 5 figures

ASSOCIATION: Institut energetiki AN LatvSSR (Institute of Power Engineering AN LatvSSR

SUBMITTED: 04Jul64 ENCL: 001 SUB CODE: SS

NR REF SOV: 000 OTHER: 008

Card 2/3

L 58293-65
ACCESSION NR: AP5009964

ENCLOSURE: 01

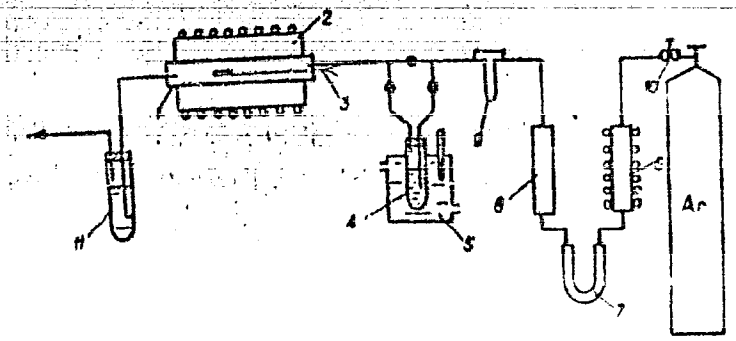

Fig. 1. Schematic diagram of experimental set-up.

1 - Quartz tube, 2 - electric oven, 3 - thermocouple, 4 - saturator, 5 - water thermostat, 6 - copper-chip column, 7 - KOH granules, 8 - silica-gel column, 9 - rheometer, 10 - reductor, 11 - oil seal.

Card 3/3

NASLEDOV, D.N.; FEL'TIN'SH, I.A.

Electric properties of gallium arsenoselenides. Fiz. tver. tela 1 no.4:565-567 '59. (MIRA 12:6)

1. Leningradskiy fiziko-tekhnicheskiy institut AN SSSR.
(Gallium compounds--Electric properties)

FELTIN'SH, I.[Feltins, I.] (Riga)

Properties of arsenoselenides of gallium at high temperatures.
Vestis Latv ak no.9:73-78 '60. (EEAI 10:9)

1. Akademiia nauk Latviyskoy SSR, Institut fiziki.

(Arsenic selenides) (Gallium)

Feltin'sh, I. A.

81887
S/181/60/002/05/06/041
B008/B058

24.7700

AUTHORS: Nasledov, D. N., Feltin'sh, I. A.

TITLE: Electrical Conductivity of Gallium Arsenide Selenides at High Temperatures

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 5, pp. 823-825

TEXT: In a preliminary study (Ref. 1) the authors investigated the temperature dependence of the electrical conductivity of gallium arsenide selenides of different compositions in the temperature range 90-570°K. The results of an investigation of the temperature dependence of the electrical conductivity up to 1,000°K, as well as of some properties of gallium selenide are given in the paper under review. Fig. 1 shows the function $\log \sigma = f(1/T)$ in the six samples of the system $GaAs-Ga_2Se_3$; the compositions of the samples are tabulated. Unlike the preliminary study, all measurements were made in an argon atmosphere. The width of the forbidden zones was determined for all samples from the temperature dependence of the Hall constant R in the range 750-1,000°K. The authors found no data on the electric properties of gallium selenide in publications, and therefore they mention some

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81887

Electrical Conductivity of Gallium Arsenide Selenides at High Temperatures

S/181/60/002/05/06/041
B008/B058

results of an investigation of this material. The temperature dependence of the thermo-emf and the Hall effect show that p-type conductivity is predominant in gallium selenide. Fig. 2 shows the temperature dependence of the mobility u and concentration n of the carriers in the temperature range in which the authors measured R. It appeared that u increased up to 750°K with the temperature, passed through a maximum, and then decreased according to the law $u \sim T^{-3/2}$. n remained practically constant up to 750°K and then it increased quickly. $\log \sigma = f(1/T)$ shows no break at 750°K (Fig. 1). The existence of an acceptor level in Ga_2Se_3 may be concluded from the function R(T) in the range 650-750°K.
There are 2 figures, 1 table, and 4 references: 3 Soviet and 1 German.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR, Leningrad
(Institute of Physics and Technology AS USSR Leningrad)

SUBMITTED: September 23, 1959

Card 2/2

38621
S/081/62/000/009/006/075
B177/B138

24.7700

AUTHOR: Feltin'sh, I. A.

TITLE: New semiconductor materials - solid solutions of GaAs - Ga_2Se_3

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 40, abstract 9B246 (Tr. In-ta energ. i elektrotekhn. AN LatvSSR, v. 11, 1961, 5-16)

TEXT: Specimens of different compositions of gallium arsenoselenides cover a wide range of resistivity, from 10^{-3} to 10^{10} ohm·cm at room temperature. It is thus possible, by varying the composition, to obtain specimens of any resistivity in this range. All specimens of different compositions of the system GaAs - Ga_2Se_3 are semiconductors, as shown by the temperature pattern of the electrical conductivity for each composition. The addition of small quantities of the component Ga_2Se_3 (< 2%) to GaAs causes an increase in electrical conductivity by a factor

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New semiconductor materials - ...

of two. A further increase in the quantity of Ga_2Se_3 in the alloy causes a sharp decrease in conductivity, owing to a decrease in the number of current-carriers and in their mobility. It is shown that Ga_2Se_3 is a semiconductor with a forbidden band of 1.98 ev, and has a hole conductivity over a wide temperature range. As regards electrical conductivity, Ga_2Se_3 approaches the dielectrics at low temperatures (at room temperature the resistivity of specimens is of the order of 10^{10} ohm·cm). [Abstracter's note: Complete translation.]

4.

Card 2/2

39615
S/194/62/000/004/043/105
D201/D308

24,7700

AUTHOR: Feltin'sh, I. A.

TITLE: Solid solutions of GaAs-Ga_2Se_3 as new semiconductor materials

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-4-7y (Tr. In-ta energ. i elektrotekhn., AN LatvSSR, 1961, 11, 5-16)

TEXT: A description of the preparation and the method of analysis of electric properties of the pseudo-binary system GaAs-Ga_2Se_3 are given, together with some of the physico-chemical and electric properties of gallium arseno-selenides. It is shown that the radiograms of alloys of the above system, with the exception of the alloy 2GaAs-Ga_2Se_3, exhibit a system of lines, the position and intensity of which characterize the ZnS structure. This shows the formation of hard substitutional alloys within a wide range of concentrations. The Debye radiograms of the 2GaAs-Ga_2Se_3 alloy

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D201/D308

Solid solutions of ...

show additional lines beside those corresponding to the ZnS structure. From the dependence of specific electric conductivity at room temperature on a given alloy it was established that gallium arseno-selenides have a resistivity range 3×10^{-3} to 10^{10} ohm.cm. The variation of the specific electric conductivity with temperature shows that all specimens of the GaAs-Ga_2Se_3 system are semiconductors. A highly degenerate electron gas exists in some of the specimens, which in their composition are near GaAs. This gas exists within a wide range of temperatures. It was found that, as the specimen composition changes from that near GaAs to that of Ga_2Se_3, their ΔE increases approximately from 1.4 to 2 eV. The differential thermal e.m.f. of the specimens lies within the interval from +200 to -700 $\mu V/^oC$ at room temperature. Its maximum value corresponds to 75% GaAs and 25% Ga_2Se_3. It is shown that the Ga_2Se_3 semiconductor, having $\Delta E = 1.98$ eV exhibits a p-type conductivity in a wide temperature range. Maximum mobility was found at 800°C and its value is approximately 10 $cm^2/V.sec$. The thermal e.m.f.

Card 2/3

Solid solutions of ...

S/194/62/000/004/043/105
D201/D308

of the junction decreases with increasing temperature, retaining the positive sign. 6 references. /Abstracter's note: Complete translation./

Card 3/3

FELTIN'SH, L. (Riga)

Study of the Hall effect and thermoelectric properties of arsenoselenides of gallium. Vestis Latv ak no.12:61-64 '59.
(EEAI 9:11)

1. Akademiya nauk Latviyskoy SSR, Institut fiziki.
(Hall effect)
(Thermoelectricity)
(Gallium arsenides)
(Gallium selenides)

CZECHOSLOVAKIA

SMOLKOVA, E; KRISTOPIKOVA, L; FELTL, L; GRUBNER, O

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague (for Grubner); 2. Institute of Analytical Chemistry, Charles University, Prague (for others)

Prague, Collection of Czechoslovak Chemical Communications, No 2, February 1966, pp 450-456

"Determination of the surface of powdery substances by the method of thermal desorption, using organic vapors as the sorbates."

23356 3/058/61/000/006/044/063
A001/A101

9,4120(1003,1140)

AUTHORS: Pel'tsan, P.V., Zapesochnyy, I.P.

TITLE: An experimental installation for studying excitation functions of inert gases

PERIODICAL: Referativnyy zhurnal. Fizika, no. 6, 1961, 342, abstract 6Zh118 ("Dokl. i soobshch. Uzhgorodsk. un-t. Ser. fiz.-matem. n.", 1960, no. 3, 41 - 42)

TEXT: Optical excitation functions of Ne three lines were determined by the method of electron beam excitation in a discharge tube. The experimental installation differed from that described earlier (RZhFiz, 1955, no. 8, 17651) by the use of a heated oxide cathod, which made it possible to improve the monokineticity of the electron beam. Cathodes, manufactured by applying an oxide mass suspension with subsequent vaporization of acetone, increase emission current 2-2.5 times as compared with cathodes produced in plants; the straggling of speeds is reduced to 0.6 - 0.85 ev for 90% electrons arrived at the receiver. Moreover, the life time of these cathodes proved to be by far longer under conditions of the

Card 1/2

An experimental installation ...

experiments. The excitation function of line 4704 Å has a maximum at 50 - 55 ev, line 4379.5 Å has a flat maximum at 52 - 56 ev, and non-separated lines 5804.1 and 5804.45 Å have a maximum at 58 - 63 ev.

D. Orlinskiy

[Abstracter's note: Complete translation]

Card 2/2

. FEL'TSAN, P.V. 1

34433
S/185/61/006/006/011/030
D299/D304

24.3500 (1137,1138)

AUTHORS: Zapisochnyy, I.P., Kyshko, S.M., Shevera, V.S., Fel'tsan, P.V., and Shimon, L.L.

TITLE: Spectroscopic investigation of excitation functions of atoms and molecules

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961, 770 - 773

TEXT: The experimental apparatus included a spectral device for separating the lines and bands, an electrophotometer with a photomultiplier, and tubes filled with gas and vapor. The experimental apparatus was described in detail in the references. It is noted that recording devices of high sensitivity were required; this was achieved by using a photomultiplier with a d.c. amplifier instead of a photographic plate. Another requirement which had to be met was homogeneity of the electron beam. In the references it was found that among secondary processes which cannot be neglected, cascade transitions have a considerable effect on the spectral lines of atoms. This fact was confirmed by the present investigation,

Card 1/3

S/185/61/006/006/011/030
D299/D304

Spectroscopic investigation of ...

conducted by the method of electron collisions. The excitation functions of cadmium-, natrium- and neon atoms were studied in detail, as well as those of diatomic nitrogen molecules and of nitric oxide and carbon monoxide. The measurements were conducted in the visible region of the spectrum, and for cadmium in the ultraviolet. A figure shows the following excitation functions of atoms: Na (λ = 5890, 5896 Å), Ne (λ = 5852 Å) and Cd (λ = 5086 Å). The investigated excitation function are characterized by the presence of several maxima, i.e. by fine structure (mainly due to the cascade transitions). The following excitation functions of diatomic molecules were investigated: of the second positive system of N_2 molecules and of the Ångstrom system of CO molecules, of the negative system N_2^+, of the comet system CO^+, and of a NO^+ system. A figure shows the excitation functions of the band of the second positive N_2 system, of the CO^+ system and of the NO^+ system, for electron energies between 10 and 150 ev. Whereas the excitation functions of bands of neutral molecules are of ordinary shape, those of molecular ions are of a complex structure, i.e. have several maxima. The most likely reason for the complex structure are

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Spectroscopic investigation of ...

elementary processes of dissociation and ionization of molecules, followed by recombination; the latter leads to a jumplike increase in the concentration of the ionic state. Such an interpretation of fine structure is supported by additional facts. Another figure, showing the excitation function of the N_2^+ band, illustrates the contribution due to the elementary processes, for various electron energies. There are 3 figures, 1 table and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc (in translation).

ASSOCIATION: Uzhhorods'kyy derzhuniversytet (Uzhhorod State University)

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S/058/62/000/006/028/136
A061/A101

AUTHORS: Fel'tsan, P. V., Zapesochnyy, I. P.

TITLE: On the excitation functions of neon lines in the visible spectrum region

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 16, abstract 6V100 ("Dokl. i soobshch. Uzhgorodsk. un-t. Ser. fiz.-matem. n.", 1961, no. 4, 44 - 45)

TEXT: Photoelectric measurements of the excitation functions of Ne lines at 4,290 Å ($3d^4F_5$-$4f^4G_6$), 5,401 Å ($2p^53s^3P_1$-$2p^53p^3P_o$), and 5,852 Å ($3s^1P_1$-$3p^3P_o$) have been conducted at low current densities and pressures of 10^{-3} - 10^{-2} mm Hg. The velocity spread of electrons in the presence of the gas investigated was 0.9 ev. The general course of the curve of the excitation function with a maximum at 45 v was similar to that obtained by Hanle (Hanle, W., "Z. Phys.", 1930, v. 65, 512). However, in addition to the principal maximum, two more were established at 22 and 26 v, which were smoothed out with an increase of pressure and current density.
[Abstracter's note: Complete translation]

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L 16155-63 BDS/EWP(q)/EWT(m) AFFTC/ASD JD

ACCESSUON NR: AR3005151 S/0058/63/000/006/D020/D020

SOURCE: RZh. Fizika, Abs. 6 D120

AUTHORS: Fel'tsan P. V.; Zapesochnyy, I. P.; Skubenich, V. V.

TITLE: Further study of the excitation functions of helium

CITED SOURCE: Dokl. i soobshch. Uzhgorodsk. un-t, Ser. fiz.-matem, i istor. n., no. 5, 1962, 38-40

TOPIC TAGS: helium, fine structure, excitation functions, ortho-helium, para-helium, pressure dependence

TRANSLATION: The excitation functions were measured for the following He lines (in Angstroms): 5047(2'P--4'S), 4438 (2'P--5'S), 4169(2'P--6'S), 4921(2'P--4'D), 4387 (2'P--5'D), 4143 (2'P--6'D), 4009 (2'P--7'D), 5016 (2'S--3'P), 3964 (2'S--4'P), 5875 (2^3P--3^3D), 4471 (2^3P--4^3D), 4713(2^3P--4^3S), 3888(2^3S--2^3P). The additional maxima for the para- and ortho-helium lines were clarified. For the 5016 and 4838 A lines, the excitation functions were measured for different pressures of the investigated gas (3×10^{-4}-- 5×10^{-2} mm Hg). It is established

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ACCESSION NR: AR3005151

that the pressure influences appreciably the change in the intensity at pressure above 5 x 10^{-3} mm Hg. A shift of the maxima of the excitation-function curves is observed for these lines.

DATE ACQ: 15Jul63 SUB CODE: PH ENCL: 00

Card 2/2

FEL'TSAN, P.V.; ZAPESOCHNYY, I.P.; SKUBENICH, V.V.

Further study of the excitation functions of helium. Dokl. i soob. UzhGU. Ser. fiz.-mat. i ist. nauk no.5:38-40 '62. (MIRA 17:9)

L 18150-63 EWT(1)/FCC(w)/EDS AFFTC/ASD/IJP(C)

ACCESSION NR: AP3004496 S/0048/63/027/008/1040/1043

AUTHOR: Zapesochny*y, I.P.; Fel'tsan, P.V.

TITLE: New data on the excitation functions of inert gases /Report presented at the Second All-Union Conference on the Physics of Electronic and Atomic Collisions held at Uzhgorod, 2-9 Oct 1962/

SOURCE: AN SSSR, Izvestiya, ser.fiz.,v.27, no.8,1963, 1040-1043

TOPIC TAGS: excitation function , electron impact, spectrum line , He, Ne

ABSTRACT: Although there have been many studies of electron impact excitation of the spectrum lines of inert gases, reliable and consistent data for all the noble gases are still lacking. The present paper gives the results of experimental determination of the excitation functions of nine He I, one He II and three Ne lines in the visible, ultraviolet and near infrared regions. The experimental set-up and procedure were the same as in earlier studies (I.P.Zapesochny*y, Vestnik Leningrad un-ta, No.11, 67, 1954 and P.V.Fel'tsan and I.P.Zapesochny*y, Dokl.i soobshch. Uzhgorod.un-ta, No.3, 41, 1960). The line radiation was recorded by means of photomultipliers. The energy straggling of the electrons was 0.65-0.75 eV for 90% of

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L 18150-63

ACCESSION NR: AP3004496

the beam; the current density was 1 x 10 A/cm^2; the gas pressure 2 x 10^{-3} mm Hg. The results are presented in the form of excitation curves (line intensity in arbitrary units versus electron energy), and are summarized in a table. Many of the excitation functions were obtained for the first time in the present study. The excitation curves for singlet series of He differ to an appreciable extent, while the triplet series curves are similar; the curve for ionized helium (He II 4685 Å 3D-4F transition) is distinctive in character. Orig.art.has: 4 figures and 1 table.

ASSOCIATION: Kafedra optiki Fiziko-matematicheskogo fakul'teta Uzhgorodskogo gos. universiteta (Chair of Optics, Physics-Mathematics Dept., Uzhgorod State Univ.)

SUBMITTED: 00 DATE ACQ: 26Aug63 ENCL: 00

SUB CODE: PH NO REF SOV: 007 OTHER: 008

Card 2/2

ZAPESOCHNYY, I.P. [Zapisochnyi, I.P.]; FEL'TSAN, P.V.

Excitation of inert gases in electron-atom collisions. Part 1. Helium. Ukr. fiz. zhur. 10 no. 11:1197-1208 N '65.
(MIRA 18:12)

1. Uzhgorodskiy gosudarstvennyy universitet.

L 64493-65 EWT(1)/T IJP(c)
ACCESSION NR: AP5012631

UR/0051/65/018/005/0911/0913
539.186.2:546.291

AUTHORS: Zapesochnyy, I. P.; Fel'tsan, P. V.

TITLE: Effective excitation cross sections of the principal helium lines

SOURCE: Optika i spektroskopiya, v. 18, no. 5, 1965, 911-913

TOPIC TAGS: excitation spectrum, excitation cross section, helium, optic measurement, optic transition

ABSTRACT: The authors investigated the effective excitation cross sections of the 7,281, 6,678, 7,065, 10,830, and [illegible] Å lines of [illegible]. These lines were not investigated in the [illegible] inconvenient spectral region [illegible] sensitive photomultipliers [illegible]. The apparatus used was described earlier [illegible], 1040, 1963), and the method of [illegible]

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L 04493-65

ACCESSION NR: AP5012631

basically the same as that used by Yakhontova (Vestn. LGU No. 10, 27, 1959). The precautions necessary to guarantee the required accuracy are described. The largest excitation cross section at the maximum (2.5×10^{-17} cm^2 was obtained for the 10,830 Å line, the upper level of which is 2^3P. The accuracy at this wavelength was 5 per cent, and in some cases the excitation functions were determined accurate to 2 -- 3 per cent. A peculiarity of the excitation functions of the lines investigated, except the 10,830 Å line, is the presence, besides the fundamental, of another very sharp and narrow maximum lying right at the excitation potential. These maxima cannot be attributed to cascade transitions and apparently characterize all excitation functions of the upper levels of these lines. A table of the various transitions and their excitation cross sections and plots of the absolute excitation functions of the helium lines are included. Orig. art. has: 1 figure and 1 table.

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L 64493-65
ACCESSION NR: AP5012631

ASSOCIATION: None

SUBMITTED: 25Jun64 ENCL: 00 SUB CODE: OP

NR REF SOV: 003 OTHER: 003

Card 3/3

L 27202-66 EWI(m) JD

ACC NR: AP6011578 SOURCE CODE: UR/0051/66/020/003/0521/0522

AUTHORS: Zapesochnyy, I. P.; Fel'tsan, P. V. 40

ORG: none B

TITLE: On the excitation cross sections of the 2p-levels of argon, krypton, and xenon

SOURCE: Optika i spektroskopiya, v. 20, no. 3, 1966, 521-522

TOPIC TAGS: argon, krypton, xenon, excitation cross section, optic transition, spectral line, cascade, optic method, spectrographic camera/ ISP-51 spectrographic camera

ABSTRACT: The authors used an optical method, involving photoelectric registration of the radiation, to measure the absolute excitation functions of almost all the spectral lines that begin with the 2p-levels of Ar, Kr, and Xe, and also of several lines corresponding to the cascade transitions to these levels. Altogether 99 lines were investigated (50 in argon, 20 in krypton, and 29 in xenon), located in the spectral interval 4500 -- 9950 Å. The experimental conditions were such that all secondary processes except cascade transitions could be neglected. A spectrograph (ISP-51) with long-focus camera and a special exit slit was used as a monochromator, and the standard source was a tungsten ribbon

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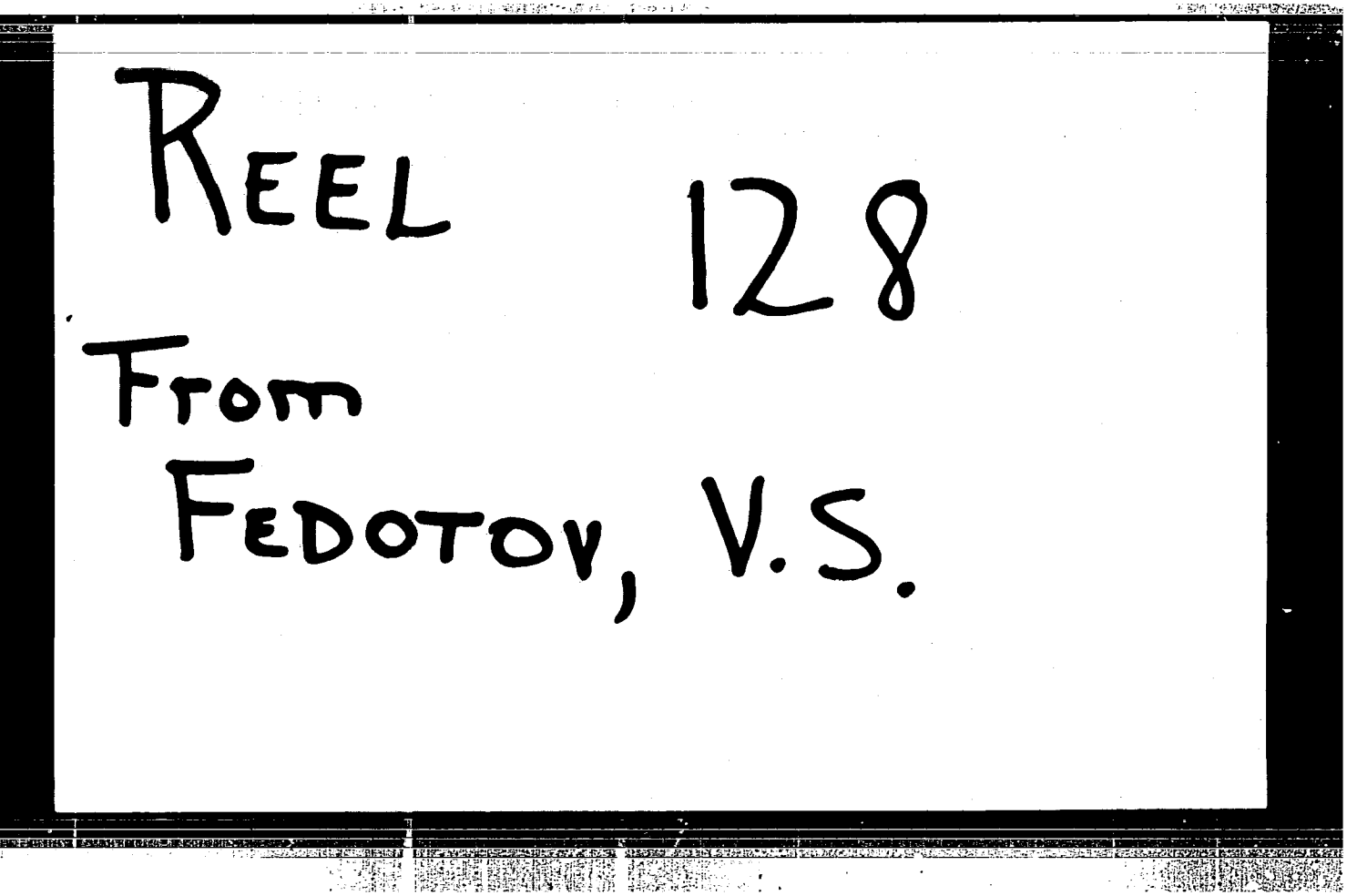
lamp SI8-200U. The maximum error in the absolute measurement was the usual 35%. A table of the effective excitation cross sections of all ten 2p-levels of argon as a function of the energy of the exciting electrons is presented. A table listing the cross sections at the maximum excitation of the 2p-levels of argon, krypton, and xenon, and plots of several excitation functions are given. The results show that on going to heavier atoms, the half-width of the maximum of the excitation function decreases and the peak moves closer to the excitation threshold of the level. It is concluded that the effective excitation cross sections at the maximum lie in the range 4×10^{-17} -- 8×10^{-19} cm^2, the maximum excitation efficiency lying in the interval from threshold to double the threshold for xenon and to triple the threshold for argon and krypton. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 31Aug65/



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